Infrared Turret Dome Camera User Manual

Products: CD600 Series, CD601 Series, CD700 Series Cameras

Please read this manual before installing and using this camera and always follow instructions for proper use. Save this manual for future reference.

CD600-CD601-CD700_CM
11/14/13

WARNING

Risk of electric shock – do not open.

To reduce the risk of electric shock, do not disassemble the camera module. No user serviceable parts are inside. Refer servicing to qualified service personnel.

WARNING

Do not use the camera if it is emitting fumes, smoke or a strange odor, or if it seems to function abnormally. Disconnect the power source immediately and consult your supplier.

CAUTION

Always follow the instructions in the installation guide when applying power. Fire and equipment damage can occur if power is applied incorrectly. For the correct power supply, refer to the specification sheet.

CAUTION

Do not install or operate in small, unventilated areas. Heat build up can significantly reduce the performance and operating life of the product and may cause a fire.

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To prevent damage, do not drop the camera or subject it to strong shock or vibration.

If installed close to a TV, radio transmitter, magnet, electric motor transformer or audio speakers the magnetic field generated may interfere with or distort the image.

Never point it toward the sun. Use caution when operating the camera in the vicinity of spot lights or other bright lights and light reflecting objects.

Do not use the camera in extreme environments where high temperatures or high humidity exists. Use the camera only in environments where temperature is between -4 °F ~ 122 °F (-20 °C ~ 50 °C) and humidity is below 85%.

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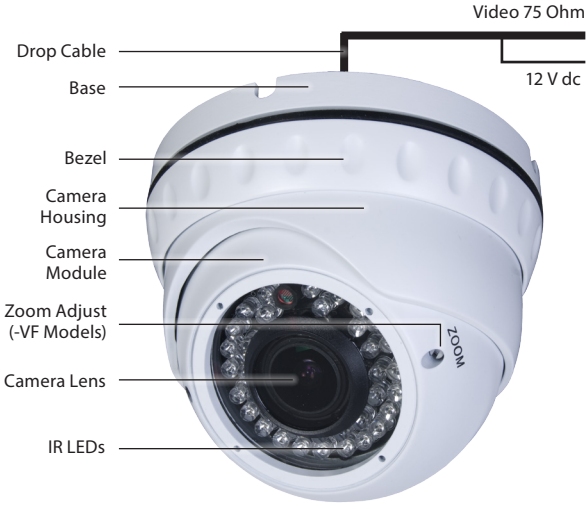
SECTION 1 Features

The CD600, CD601, and CD700 series cameras are weatherproof, vandal resistant turret dome cameras, ideal for outdoor or indoor locations where surveillance in low-light environments is required. These cameras include:

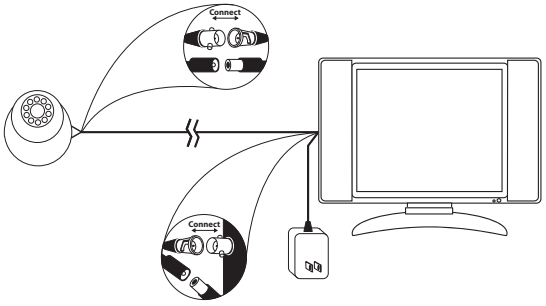
- Advanced image sensors for greater picture clarity
- Precision lenses to achieve the perfect view (varifocal (VF) cameras have 2.8 - 12 mm adjustable zoom)
- The ability to see in the dark with built-in IR array
- Turret design for increased vandal resistance
- Each model available with a black or white shell

1.1 Camera components

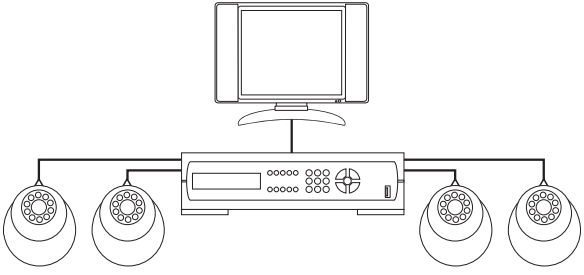


Camera assembly

1.2 Camera connections



Single camera with monitor



Multiple camera system with DVR and monitor

SECTION 2 Installation

2.1 What's in the box

The camera package contains:

- Camera assembly
- Instruction manual
- Hardware kit, including four screws and four wall inserts

2.2 Tools you need

To install the camera, you will need:

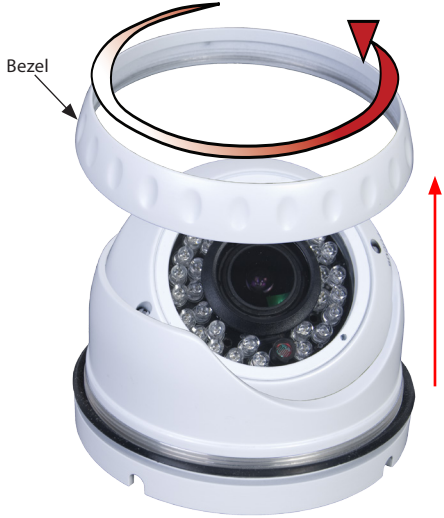
- Phillips #2 screwdriver
- Small blade screwdriver (for adjusting VF model cameras)

Depending on how the camera is mounted, you may also need:

- Hammer
- Drill with 3/32" and 3/16" drill bits
- 3/4" hole saw

2.3 Installation instructions

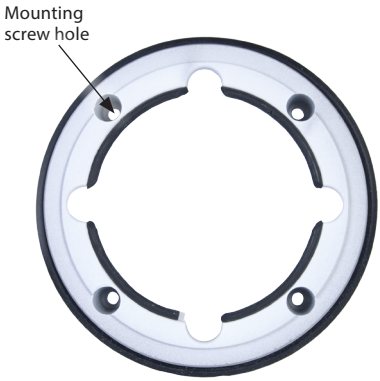
1. Separate the base from the rest of the camera assembly by unscrewing the housing bezel.



Remove the bezel

2. Determine where the camera will be mounted.

3. Using the base as a template, mark the location of the four mounting screw holes.



Camera Base

4. Drill mounting screw holes into the mounting surface.

    a. If the mounting surface is a soft material, such as a drywall, use a 3/16" bit to drill the mounting holes. Use a hammer to tap the wall inserts provided into each hole until they are flush with the surface.

    OR (continue on next page)

5. Drill mounting screw holes into the mounting surface.

   a. If the mounting surface is a soft material, such as a drywall, use a 3/16" bit to drill the mounting holes. Use a hammer to tap the wall inserts provided into each hole until they are flush with the surface.

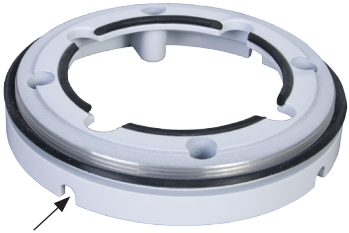
      OR

   b. If the mounting surface is a very soft material, such as ceiling tile, place a wood block behind the tile. Screws longer than 1" may be required. Drill holes for the mounting screws through the surface and into the wood block.

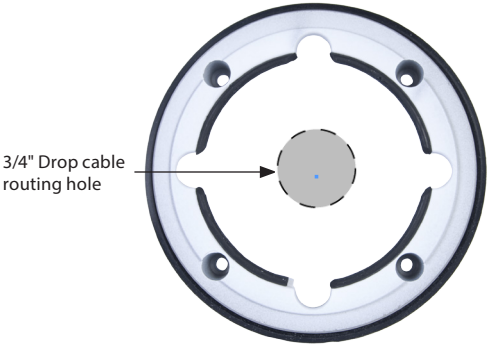
      OR

   c. If mounting the camera on a harder surface, such as wood, drill the mounting screw holes with a 3/32" bit.

6. Determine the cable routing. If the cable is to be routed through a hole in the mounting location within the coverage of the base, perform the following steps. If the cable will be routed through a cable channel in the base, **skip to step 9.**



7. Drill a 3/4" hole through the mounting surface at the center of the base.



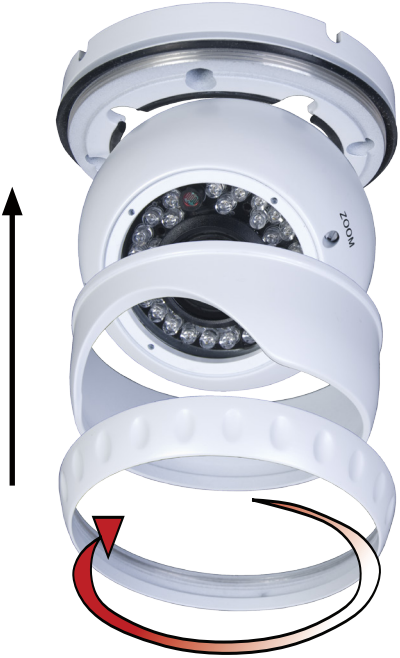
Use a #2 Phillips screwdriver to mount the base with the provided screws.

8. With the camera in the camera housing, route the drop cable through the 3/4" hole until the camera housing is fitted onto the base. Place the housing bezel over the camera housing and screw it onto the base until the camera and camera housing are held in place. **Skip to step 12.**

9. Set the camera on the base with the camera cable pressed into one of the cable guides of the base. Allow some slack in the cable within the base to allow for camera positioning later.

10. Use a #2 Phillips screwdriver to mount the base with the provided screws.

11. Without allowing the camera to hang by the drop cable, place the camera module onto the base, cover with the camera housing, then move the bezel into place. Screw the housing bezel onto the base until the camera and camera housing are held in place.

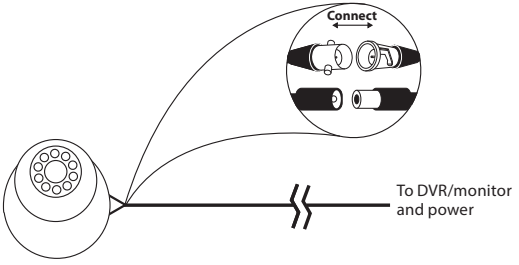


Reassemble camera

12. Attach the BNC video/power cable to the camera cable as required.

CAUTION

Notice that power connectors on the BNC video/power cable are different at each end!

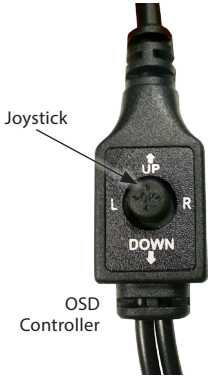


Cable attachment

2.4 OSD Setup (CD700 series only)

CD700 series cameras include on-screen display (OSD) software for adjusting the internal camera settings to complement specific environment where it is installed. These settings are adjusted using the OSD controller attached to the camera drop cable.

The OSD controller includes a joystick that can be pushed down and rocked **UP**, **DOWN**, left (**L**) and right (**R**), or, to open the menu system and navigate the menus.



To use the OSD controller, press the joy stick in (toward the controller block) to open the OSD menu. (See the menu chart on the following page.) Rock the joystick **UP** or **DOWN** to highlight a parameter or submenu, then press the joystick in to select it. Rock the joystick right (**R**) to highlight an option, **UP** or **DOWN** to identify the option, then press the joystick in to select it. Repeat this method to navigate the menu system and select options.

OSD MENU OPTIONS

OSD SET	LENS	MANUAL	
		AUTO	TYPE: DC / VIDEO
			MODE: CLOSE / AUTO/OPEN SPEED: 0-255
	SHUTTER/ AGC	AUTO	HIGH LUMINANCE MODE: SHUT+AUTO IRIS / AUTO IRIS
			BRIGHTNESS: 0-255
			LOW LUMINANCE MODE: OFF / AGC
			BRIGHTNESS: ×0.25, ×0.5, ×0.75, ×1
		MAN-UAL	MODE: SHUT+AGC
			SHUTTER: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 s
			AGC: 6, 12, 18, 24, 30, 36, 42, 44.8
	WHITE BAL	ATW	SPEED / DELAY CNT / ATW FRAME / ENVIRONMENT
		PUSH / ANTI CR / PUSH LOCK / USER1 / USER2 / MANUAL	
	BACK LIGHT	OFF / BLC / HLC	
	PICT ADJUST	MIRROR / BRIGHTNESS / CONTRAST / SHARPNESS / HUE / GAIN	
	ATR	OFF	--
		ON	LUMINANCE/CONTRAST

OSD SET (cont.)	MOTION DET	OFF	--
		ON	DETECT SENSE / BLOCK DISP / MONITOR AREA / AREA SEL / TOP / BOTTOM / LEFT / RIGHT
	PRIVACY	OFF	--
		ON	AREA SEL / TOP / BOTTOM / LEFT / RIGHT / COLOR / TRANSP / MOSAIC
	DAY/NIGHT	COLOR	--
		B/W	BURST: OFF / ON
		AUTO	BURST: OFF / ON
			DELAY CNT / DAY-NIGHT / NIGHT-DAY
	NR	NR	MODE: Y/C, OFF, Y, C
	CAMERA ID	OFF/ON	--
	SYNC	INT	--
	LANGUAGE	ENGLISH / CHINESE / JAPANESE / ESPANOL / PORTUGUESE / PYCCKNN / FRANCAIS / DEUISCH	
	CAMERA RESET / BACK / EXIT / SAVE ALL		

SECTION 3 Aiming the Camera

1. Connect the video cable from the camera to a test monitor or to the BNC input on the DVR.

2. Apply 12 Vdc power to the camera to power it on.

3. Unscrew the bezel until the camera module and housing can be rotated on the base.

4. While observing the video from the camera, adjust the camera to point it at your surveillance target.

5. Position the housing to the LED array and the FOCUS and ZOOM adjusters (varifocal models) are accessible

6. Screw the bezel onto the base tight enough to hold the camera assembly securely in place.

7. If you are installing a CD601BVF / CD601WVF or CD700BVF / CD700WVF camera, use a small blade screwdriver to adjust the focus and zoom if necessary.

SECTION 4 Cleaning

Clean the camera lens and IR lamp shield with an approved glass cleaning solution and a lint free cloth.

- Dust can be removed from the unit by wiping it with a soft damp cloth. To remove stains, gently rub the surface with a soft cloth moistened with a mild detergent solution, then rinse and dry it with a soft cloth.
- Remove all foreign particles, such as plastic or rubber materials, attached to the camera housing. These may cause damage to the surface over time.

CAUTION

Do not use benzene, thinner or other chemical products on the camera assembly; these may dissolve the paint and promote damage of the surfaces. Before using any chemical product, read the accompanying instructions carefully.

SECTION 5 Specifications

Model	CD600W, CD600B	CD601W, CD601B	CD601WVF, CD601BVF
Sensor	1/3" CMOS	1/3" SHARP CCD	1/3" SHARP CCD
Effective Picture Elements (H×V)	728 (H) x 488 (V)	768 (H) x 494 (V)	768 (H) x 494 (V)
Horizontal Resolution	600 TV Line		
Minimum Illumination	0.1 lux F1.2 / 0 lux (with IR LED on)	0.1 lux F1.2 / 0 lux (with IR LED on)	0.01 lux F1.2 / 0 lux (with IR LED on)
S/N Ratio	More than 46 dB	More than 48 dB	More than 48 dB
Scanning System	2:1 interface		
Synchronous System	Internal, negative sync.		
Auto-electronic Shutter	1/60 s ~ 1/100,000 s		
Gamma Characteristic	0.45		
IR Distance	65 ft (with Ø5 x 24 PCS Infrared LED array)	65 ft (with Ø5 x 24 PCS Infrared LEDs)	90 ft (with Ø5 x 36 PCS Infrared LED array)
IR Status	Under 10 lux by CDS	- -	Under 10 lux by CDS
IR Power On	CDS AUTO Control	- -	CDS AUTO Control
Video Output	1 Vp-p, 75 Ω		
Auto Gain Control	Auto		
Power/Current	12 Vdc (+/-10%) / 350 mA	12 Vdc (+/-10%) / 350 mA	12 Vdc (+/-10%) / 450 mA
Lens	3.6 mm / F2.0	3.6 mm / F2.0	2.8 - 12 mm manual zoom
Dimensions	Ø3.7 x 2.7 (H) in (Ø94 x 69 (H) mm)	Ø3.7 x 3.15 (H) in (Ø94 x 80 (H) mm)	Ø5.12 x 3.67 (H) in (Ø131 x 93 (H) mm)
Weight	15.9 oz (450 g)	15.9 oz (450 g)	28.2 oz (800 g)
Storage Temperature	-22 ~ 140 °F (-30 ~ 60 °C) RH 95 % max		
Operating Temperature	14 ~ 122 °F (-10 ~ +50 °C) RH 95 % max		

SECTION 5: SPECIFICATIONS

Model	CD700W, CD700B	CD700WVF, CD700BVF
Sensor	1/3" SONY Super-HAD CCD II	1/3" SONY Super-HAD CCD II
Effective Picture Elements (H×V)	976 (H) x 494 (V)	
Horizontal Resolution	700 TV Line	
Minimum Illumination	0.001 lux F1.2 / 0 lux (with IR LED on)	0.001 lux F1.2 / 0 lux (with IR LED on)
S/N Ratio	More than 52 dB	
Scanning System	2:1 interface	
Synchronous System	Internal, negative sync.	
Auto-electronic Shutter	1/60 s ~ 1/100,000 s	
Gamma Characteristic	0.45	
IR Distance	65 ft (with Ø5 x 24 PCS Infrared LED array)	90 ft (with Ø5 x 36 PCS Infrared LED array)
Video Output	1 Vp-p, 75 Ω	
Auto Gain Control	Auto	
Power/Current	12 Vdc (+/-10%) / 350 mA	12 Vdc (+/-10%) / 450 mA
Lens	3.6 mm / F2.0	2.8 - 12 mm manual zoom
Dimensions	Ø3.7 x 2.7 (H) in (Ø94 x 69 (H) mm)	Ø5.12 x 3.67 (H) in (Ø131 x 93 (H) mm)
Weight	15.9 oz (450 g)	28.2 oz (800 g)
Storage Temperature	-22 ~ 140 °F (-30 ~ 60 °C) RH 95 % max	
Operating Temperature	14 ~ 122 °F (-10 ~ 50 °C) RH 95 % max	

SECTION 6 Troubleshooting

Before sending the camera for repair, please check below to make sure that the camera is installed correctly. If it still does not perform adequately, please consult your supplier.

1. No picture on the monitor screen.
    a. Check that all connected devices are powered on.
    b. Confirm that the voltage is correct.
    c. Confirm that the power supply provides enough current to power the camera.
    d. Check that all video cables are correctly connected.

2. The picture is not clear.
    a. Check that your monitor is correctly adjusted.
    b. Confirm that the glass in front of the lens is clean. *If there is dust, dirt or fingerprints on the glass, the image quality will be affected. To clean the glass use a soft, dry and non-abrasive cloth or a commercially available lens cleaning set.*
    c. Correctly adjust the focus (VF (varifocal) models only.)

3. The picture has interference.
    a. The camera may be close to a high voltage source, such as a power generator.
    b. The BNC cable is not terminated properly.
    c. The video cables are not connected properly.